

Total No. of Printed Pages:2

SUBJECT CODE NO:- H-223
FACULTY OF SCIENCE AND TECHNOLOGY
B.E. (Mechanical) (Sem-II)
Elective-II: Industrial Engineering
[Revised]

[Time: Three Hours]**[Max.Marks:80]**

Please check whether you have got the right question paper.

N.B

1. Solve any three questions from each section.
2. Figures to the right indicate full marks
3. Assume suitable data, wherever required and state it clearly.

Section -A

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|-----|---|----|
| Q.1 | a) Explain basic and excess work content? What are the reasons for excess work content? | 07 |
| | b) Enlist the factors influencing productivity. Explain how each factor will affect productivity. | 06 |
| Q.2 | a) Explain in brief – i) flow diagram and ii) Two handed process chart. | 06 |
| | b) State and explain in brief the steps involved in method study procedure. | 07 |
| Q.3 | a) A describe briefly 'SIMO chart' and state its application. | 07 |
| | b) Critical examination forms the basis for methods improvement.Explain. | 06 |
| Q.4 | a) Define micro motion study and state its objective. | 07 |
| | b) State the principles of motion economy related to i) work place layout ii) Use of Human body. | 06 |
| Q.5 | Write short note on the following (any two) | 14 |
| | i) Methods of job evolution | |
| | ii) Various allowances considered while building the standard time | |
| | iii) Merit rating methods | |

Section – B

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| Q.6 | a) Define work sampling. Also mention the procedure for conducting a work sampling study. | 07 |
| | b) Explain method time measurement (MTM) technique for work measurement. Also discuss conventions for recording MTM data. | 07 |

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Q.7	a) Explain synthetic rating and analytical estimating techniques.	07
	b) Define predetermined motion time analysis (PMTS). Also explain factors to be considered while using PM TS.	06
Q.8	a) Explain Toyota production system	07
	b) Write a short note on push and pull system in JIT	06
Q.9	a) Describe Kaizen umbrella for quality improvement.	07
	b) Explain Kaizen in relation with innovation and PDCA cycle.	06
Q.10	a) Define single minute exchange of dies. Discuss its procedure and effects.	07
	b) Explain the working of Kanban system.	06